

The opinion in support of the decision being entered today was **not** written for publication and is **not** binding precedent of the Board.

Paper No. 33

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte JAMES F. SARVER, DUANE A. STAFFORD, STEVEN C. HANSEN
and TIMOTHY R. BRUMLEVE

Appeal No. 1998-0551
Application No. 08/299,292

ON BRIEF

Before KRASS, HECKER, and BARRY, **Administrative Patent Judges**.
HECKER, **Administrative Patent Judge**.

DECISION ON APPEAL

This is a decision on appeal from the final rejection of claims 1 through 28 and 37 through 44. Claims 29 through 36 have been withdrawn from consideration as being directed to a non elected invention (paper no. 7).

Appellants' invention relates to a fluorescent lamp in which mercury is vaporized during lamp operation. As the operating temperature increases, the mercury vapor pressure increases and the efficiency of the lamp is reduced. There

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are two ways of controlling the mercury vapor pressure,
temperature control and **amalgam** control. Appellants use
temperature control with zinc. Representative
independent claim 7 is reproduced as follows:

7. A temperature controlled fluorescent lamp having a predetermined amount of mercury sealed therein characterized in that the mercury is in the form of a binary zinc amalgam that is partially in the liquid and partially in the solid phase when the lamp is operating.

The reference relied on by the Examiner follows:

Evans et al. (Evans) 4,145,634 Mar. 20, 1979

Claims 1 through 23, 25 through 28, and 37 through 44
stand rejected under 35 U.S.C. § 102(b) as being anticipated
by Evans.

Claim 24 stands rejected under 35 U.S.C. § 103 as being
obvious over Evans.

Rather than repeat the arguments of Appellants or the
Examiner, we make reference to the brief, reply brief,
supplemental reply brief, answer, and supplemental answer for
the respective details thereof.

OPINION

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After a careful review of the evidence before us, we agree with the Examiner that claims 17 through 23 and 42 through 44 are properly rejected under 35 U.S.C. § 102(b), and claim 24 is properly rejected under 35 U.S.C. § 103. Thus, we will sustain the rejection of these claims but we will reverse the rejection of remaining claims on appeal for the reasons set forth *infra*.

It is axiomatic that anticipation of a claim under § 102 can be found only if the prior art reference discloses every element of the claim. *See In re King*, 801 F.2d 1324, 1326, 231 USPQ 136, 138 (Fed. Cir. 1986) and *Lindemann Maschinenfabrik GMBH v. American Hoist & Derrick Co.*, 730 F.2d 1452, 1458, 221 USPQ 481, 485 (Fed. Cir. 1984). "Anticipation is established only when a single prior art reference discloses, expressly or under principles of inherency, each and every element of a claimed invention." *RCA Corp. v. Applied Digital Data Systems, Inc.*, 730 F.2d 1440, 1444, 221 USPQ 385, 388 (Fed. Cir. 1984), (citing *Kalman v. Kimberly-Clark Corp.*, 713 F.2d 760, 772, 218 USPQ 781, 789 (Fed. Cir. 1983)).

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Appellants argue that **temperature** controlled lamps vary in the amount of mercury introduced, and that Appellants precisely control the amount of mercury by forming an amalgam with a metal, such as zinc, which does not have an impact on the mercury vapor pressure. (Brief-pages 4 and 5.) Appellants contend that Evans is directed to only **amalgam** controlled lamps (which control the mercury vapor pressure), and although zinc is mentioned as an alternative to indium (column 4, lines 2-4), zinc will not control mercury vapor pressure. Thus, Evans is in error as to zinc being suitable in the **amalgam** controlled lamps. (Brief-pages 5-7.) Appellants supply graphs to show the lack of effect zinc amalgam has on vapor pressure (brief-pages 8 and 9) and support this with a declaration from an expert in the field (declaration of paper no. 8). The Examiner has not disputed that these graphs show a lack of vapor pressure control with zinc amalgam. Furthermore, the Examiner agrees with the premise that the control of mercury vapor pressure occurs by two separate methods, **temperature** control and **amalgam** control

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(advisory action, paper no. 18, top of page 1, mailed November 20, 1996).

We have reviewed Evans and agree with Appellants that Evans is directed solely to **amalgam** controlled lamps. The Examiner's response (answer-pages 4 and 5) that Evans is a **temperature** controlled lamp because Evans suggests zinc amalgam is simply contrary to the Evans disclosure.

The Examiner has provided no evidence to refute Appellants' graphs and declaration that zinc amalgam will not work in an **amalgam** controlled lamp. Evans has **suggested** an amalgam controlled lamp using zinc amalgam, but, even if zinc amalgam would work for an amalgam controlled lamp, the quantity, size, consistency, solid/liquid phase, etc. of the pellets are not disclosed. As argued by Appellants (brief-page 15), there is no evidence to support the Examiner's contention that the disclosed characteristics of the indium pellets in Evans also apply to zinc pellets. Even if the characteristics of indium and zinc pellets were the same, in the context of Evans, one would expect the result to be an

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amalgam controlled lamp, as opposed to Appellants' **temperature** controlled lamp.

The Examiner further responds that zinc amalgam works because that is what Appellants claim (answer-page 5). But, Appellants claim a **temperature** controlled lamp, and there is no basis in Evans for determining the proper characteristics for indium, let alone zinc, in a **temperature** controlled lamp.

Accordingly, we will not sustain the Examiner's rejection of any claims directed to a temperature controlled lamp using zinc amalgam. These claims include claims 7 through 10. With respect to claim 1, the Examiner contends that the language "which does not rely on amalgamative metal to control mercury vapor pressure" is **functional**, and is given no patentable weight (final rejection, paper no. 11, page 11). We do not agree. In the context of this invention, with two methods of lamp operation (temperature controlled and amalgam controlled), the cited language is considered to be an alternative way of expressing **temperature** controlled. Thus, we will not sustain the Examiner's rejection of claims 1 through 6.

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Since the Examiner has provided no prior art in the rejection regarding **temperature** controlled fluorescent lamps, we will not sustain the Examiner's rejection of any claims directed to a **temperature** controlled lamp. Thus, we will not sustain the Examiner's rejection of claims 11 through 16. Although claims 38 and 40 do not recite the words "temperature controlled", we find this limitation expressed in an alternative manner, as discussed with respect to claim 1 *supra*, thus we will not sustain the Examiner's rejection of claims 38, 39, 40, and 41.

With respect to claim 37, although neither limited to a temperature nor amalgam controlled lamp, the claimed characteristics of the materials are not taught by Evans as discussed ***supra***, thus we will not sustain the Examiner's rejection of this claim.

With respect to claims 17 through 28 and 42 through 44, we find a lamp fill material being claimed. The language "for a temperature controlled fluorescent lamp" (claim 17) or "for a fluorescent lamp" (claims 22 and 42) merely represents an intended use, and does not limit the claimed fill material.

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Evans clearly suggests a zinc amalgam lamp fill material. As noted by Appellants on page 13 of their brief (citing **The Mathison Alkali Works v. Coe**, 90 Fed.2d 443 (D.C. Cir 1938)), "the unintentional statement of a fact might be considered sufficiently a part of the prior art to require its investigation. But a statement so contrary to fact, as this was demonstrated to be, is not a part of the prior art." Since the use of zinc amalgam as a lamp fill material is not contrary to fact, as evidenced by Appellants' use thereof, Evans statement regarding zinc amalgam is considered a prior art teaching. Thus, we will sustain the Examiner's rejection of claims 17, 22 and 42. Claims 18 through 21, 43 and 44 recite characteristics for zinc amalgam which are taught by Evans in generic statements for all suggested amalgams, e.g. pellets, mercury liquid at 20°C, metal (zinc) outer shell, porous and metastable. Note Evans, column 3, line 68 to column 4, line 3; column 4, line 8; column 4, line 44; and column 6, line 64 to column 7, line 8. Accordingly, we will sustain the Examiner's rejection of claims 18 through 21, 43 and 44.

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Claim 23 merely adds language to the intended use, not affecting the claimed lamp fill material itself, thus we will sustain the Examiner's rejection as to this claim.

With respect to claim 24, as noted by the Examiner at column 4, lines 40-48, Evans prefers coated pellets, which implies the use of uncoated pellets is known. Since claim 24 is subject to a 35 U.S.C. § 103 rejection, a specific teaching is not required as to uncoated pellets. Accordingly, one of ordinary skill in the art would have inferred from the context of Evans, that uncoated pellets (ones that stick to surfaces as noted in Evans' discussion of prior art) were known in the art. Thus, we will sustain the Examiner's rejection of claim 24, directed to an uncoated lamp fill material per se.

With respect to claims 25 through 28, Evans lacks the specifics recited, and as noted supra, the Examiner has provided no evidence that the specifics disclosed for indium hold true for zinc. Thus, we will not sustain the Examiner's rejection of claims 25 through 28.

In view of the foregoing, the decision of the Examiner rejecting claims 17 through 23 and 42 through 44 under 35

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U.S.C. § 102, and claim 24 under 35 U.S.C. § 103 is affirmed.
However, the decision of the Examiner rejecting claims 1
through 16, 25 through 28, and 37 through 41 is reversed.

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No time period for taking any subsequent action in
connection with this appeal may be extended under 37 CFR
§ 1.136(a).

AFFIRMED-IN-PART

ERROL A. KRASS)	
Administrative Patent Judge)	
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)	
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)	BOARD OF PATENT
STUART N. HECKER)	APPEALS
Administrative Patent Judge)	AND
)	INTERFERENCES
)	
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)	
LANCE LEONARD BARRY)	
Administrative Patent Judge)	

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ROGERS & KILLEEN
510 KING STREET SUITE 400
ALEXANDRIA, VA 22314

